REMARKS

Claims 89-102 are in the application. Claims 1-88 have been canceled. Support for the new claims is found throughout the specification, including the claims as originally filed.

The inventors teach degradation and potential loss of the desirable actuation ability of natural and implanted bodily members being harmful to patients. Specific taught examples of susceptible actuators include swinging, hinging, pivoting and occluding members (e.g., natural and artificial valves), as well as plugging, unplugging, connecting, distending and flexing members (such as plugging electrical connectors or flexing (to occlude) valve leaflets). Also, implanted members which desirably pass-through or pass-into other members or are threaded into other implanted members are specifically taught. In all of these examples, the loss of or degradation of desirable actuation directly contributes to a health hazard such as for a valve no longer functioning or an implanted connector which cannot be engaged or disengaged. It should also be clearly apparent from new Claim 1 that fouled or foulable stents or locally occluded lumens do not involve fouled or foulable actuators and that our claimed invention always includes a damage-reducing standoff which can be directly presented to or even passed-through the cleanable actuating target.

Specific citations from teaching supporting the above and the new claims herein:

"Actuation, actuating": page 3, lines 23, 25; page 4, lines 17, 24, 29, 34; page 5, lines 1, 2, 4, 5, 10, 11, 12, 28; page 6, line 6; page 7, lines 18, 19, 31; page 8, line 8;

"Swing, swinging": page 4, line 3; page 11, lines 7, 11, 12;

"Occlude, occluding": page 2, lines 2, 4-5; page 4, line 3; page 9, line 24; page 11, lines 7, 31, 32; page 12, lines 1, 5, 7, 23, 24; page 15, line 32; page 19, lines 17, 20;

"Hinged or hinging": page 11, line 12; page 12, lines 17, 27; page 19, lines 18;

"Plugging, unplugging" (as for mating members): page 5, line 10;

"Flexing, flexural or distending/distention": page 12, line 27; page 24, line 1; page 5, lines 14, 28; page 7, lines 17, 32; page 8, line 8;

"Passing through/into, passage-of through/into or threading": page 12, line 26, page 12, line 27;

"pivot or pivoting": page 2, line 1; page 11, line 12; page 12, lines 17, 27.

In the Office Action dated July 24, 2009, Claims 1-11, 13, 18-23, 26-27, 31-35, 37-41, 45, 48-50, 53, 57-64, 73, 74, and 76-84 were finally rejected under 35 USC 102(b) as being anticipated by Olsson (U.S. Patent 5,713,831), while Claims 28, 29, 47, 65-69, 71, 72, and 75 were finally rejected under 35 USC 103(a) as being unpatentable over Olsson.

General Comments Regarding the Office Action and Cited Art Cited

(a) We previously claimed in our Claim 1 deposit removal from moving parts. We now understand that wording was too broad and what we mean to focus on and did indeed specifically teach repeatedly is actuating parts, per new Claim 89, wherein by actuating is specifically meant that the implant or body member has (a) adjacent, joined or mating portions which normally at least one of swing, hinge, pivot, distend, or flex relative to each other at least once or (b) mating parts which are plugged, connected, threaded or passed into or through each other. Thus, for example, Olsson's teachings (as well as others) involve clearing static thrombi in plugged lumens and do not involve a compromised desirable actuator. Nor does any cited art involve cleaning of stents, as the stent is not an actuator as-placed.

Thus, for a thrombus, such as Olsson's, the motion (moving) of the overall heart is irrelevant as he does not discuss any actuating part needing cleaning. What clearly does fit our definition of actuating, for example, are valves with mating moving parts whose parts can seize or gum-up if they have debris on or in them. It does not matter whether the valve is a heart valve (wherein the heart itself also moves with the whole valve) or the valve is a leg valve (wherein the valve as a whole does not move with respect to the leg). In both cases, a locally actuating valve component is prevented from failing.

(b) Further beyond item (a) above, we include in our new Claim 89 our standoff, which allows one or more of damage-free treatment of the valve from a standoff distance (or even from within), allows passage through the valve of the emitter without valve damage, and allows gentle but forced temporary stoppage of the

valve's actuation. This is a fundamental construction limitation. Note that the standoff is combined with the cleaning of a fragile actuator which would otherwise potentially be damaged by the cleaning attempt. In the case of a saline filled balloon standoff, its size is limited only by where it must pass uninflated (delivery through lumens) and inflated (standing off from, stopping-of or passing-through an actuator), so it will be utilized in a range of sizes. There is substantial art on similar balloons used for unrelated purposes such as forceful expansion of lumens and physical displacement of blood for visualization purposes.

(c) As further limitations in our new reduced Claims 89-102, please note the following:

Claim 91, wherein the actuator is a valve or connector of some type

Claim 93, wherein the acoustic power is high enough to cause streaming or cavitation (Olsson, for example, is explicitly way below this power level);

Claim 95, wherein acoustic imaging and/or acoustic signatures are employed to monitor or control the use of the apparatus;

Claim 96, wherein actuation itself or a state thereof is specifically monitored;

Claim 97, wherein deposits within an actuator portion are specifically targeted (as opposed to a shotgun wide-area treatment of Olsson); and

Claim 99, wherein the debris is routed away safely in a controlled manner and/or eroded using the help of microbubbles.

(d) Our new Claim 89 is for invasive/minimally invasive devices only involving the need for a catheter or scope, for example, and requiring our inventive standoff. Note that a noninvasive device would not require a standoff or a scope/catheter and would be much larger (Olsson external device)

So, our revised and reduced claims would also cover medical device implants such as a previously implanted electrical connector which needs to be cleaned and then disengaged upon a later surgery, for example. In that case, the mating connector parts are the actuating parts (relative to each other) and the connector is desirably normally connectable/disconnectable (actuatable) if not fouled.

Note again that any art involving cleaning fouled stents, for example, is not relevant because there are no desirably actuating parts in a placed stent. Any art involving cleaning lumens (such as plaques therefrom) is not relevant either, because there is not any desirable actuation being interfered with per our definition.

The application is considered to be in condition for allowance. The Examiner is respectfully requested to take such action. If the Examiner has any questions, she is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,

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